

B2
cont signal which is detected by the detector 24, depends upon the effect of the material specimen in the focal plane.

On page 7, replace paragraph at lines 3-11 as follows:

B3
Light scattered from the two spots 220 and 221 inside, or on, the object 215 is collected by lens 210 and angularly combined in the objective 210 and directed towards the beam splitter 240. A portion of the reference and sample light is directed to a photodetector and signal conditioning circuit 245 which may be a silicon photodiode and amplifier. The portion of the light from both arms incident on the detector that is both parallel and coherent will interfere in a detection arm terminated at the detector 245 and produce a phase modulated electric signal which varies synchronously with the reference mirror position. The amplitude of the modulated signal is proportional to the reflectivity of the subject at the point inside the object that has equal optical path as the reference arm to within the coherence length of the source.

In the Claims:

Please rewrite Claims 12, 14 and 18 as follows:

B4
12. (twice amended) A scanning microscope which comprises a laser providing an incident beam, a beam splitter, a scanner for scanning an image plane in a specimen section in general orthogonal X-Y directions in said plane, said laser being a plural transverse mode laser providing an amplitude distribution having a plurality of lobes in opposing phase relationship to form spaced spots in a focal plane in said section and capable of overlapping spots behind said section, and an objective for focusing said spots in said focal plane, an aperture, a photodetector behind said aperture, and optics for focusing return light from the spots deflected by said beam splitter at said aperture.

B5
14. (twice amended) An optical coherence imaging system for imaging a specimen section, which comprises a source providing light having low temporal coherence propagating in transverse, opposing-phase, multi-mode, a beam splitter which directs the light from said source into a reference arm and a sample arm wherein the light is incident on an image plane in said transverse, opposing phase, multi-mode in which it propagates to said image plane in the specimen section and capable of spatially overlapping behind the image plane, a scanner in said sample arm for scanning said specimen in generally orthogonal directions, and also in said